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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,840	12/08/2003	Katsuji Hattori	OGOH:071B	9296
6160	7590	03/24/2004	EXAMINER	
PARKHURST & WENDEL, L.L.P. 1421 PRINCE STREET SUITE 210 ALEXANDRIA, VA 22314-2805			CHUNG, DAVID Y	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/728,840

Applicant(s)

HATTORI ET AL.

Examiner

David Y. Chung

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-9 is/are rejected.
- 7) ☒ Claim(s) 5, 10 and 11 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 09/821,039.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1-3 rejected under 35 U.S.C. 102(b) as being anticipated by
Matsushima (U.S. 5,917,563).**

As to claims 1-3, Matsushima discloses a liquid crystal display having an organic insulation material and additional capacity between the pixel and bus line. In figure 6, the pixel electrode 25 overlaps both the source line 20 and gate line 16. In figure 7, a photosensitive resin is used as the flattening film 24. See column 14, lines 59-67. Figure 6 shows a plan view of the pixel including the switching element (TFT). The pixel electrode 25 is connected to the switching element via drain electrode 19. With the exception of bistable displays, LCD's inherently have a different alignment state under no voltage than in the display state in the presence of an electric field.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-9 rejected under 35 U.S.C. 103(a) as being unpatentable over Matsushima (U.S. 5,917,563) in further view of Kuo (U.S. 6,424,397).

As to claims 6 and 7, Matsushima does not disclose irregularities on the flattening layer. However, Kuo discloses forming protrusions over the pixel electrodes in order to create a multi-domain display. Kuo teaches that by dividing the pixel region into two or more domains, the viewing angle of the display is increased. See column 14, lines 15-21. See also figure 4E. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include irregularities in order to increase the viewing angle of the display. Kuo also teaches that the slant angle of the protrusions can be adjusted to the desired value. See column 7, lines 20-35. Adjusting the slant angles would also involve adjusting the height of the protrusions. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to adjust the height of the protrusions according to the desired liquid crystal alignment because this has been shown to be a result effective variable and the adjustment of result effective variables has been determined to be obvious to those of ordinary skill.

As to claims 8 and 9, Matsushima does not disclose the spacing between the pixel electrodes. However, it was well known to adjust this spacing depending on the desired amount of auxiliary capacitance. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to adjust the spacing of the pixel electrodes according to the desired level of auxiliary capacitance because adjustment of a result effective variable has been determined to be obvious to those of ordinary skill in the art.

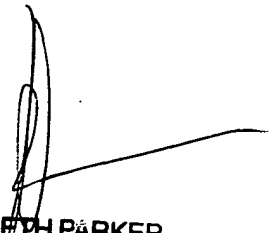
Allowable Subject Matter

Claims 5, 10 and 11 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: None of the prior art taught or suggested a liquid crystal display with pixel electrodes overlapping the source or gate lines and formed on a flattening film, wherein the display changes from splay alignment under no voltage to bend alignment during display.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Chung whose telephone number is (571) 272-2288. The examiner can normally be reached on Monday-Friday from 8:30 am to 5:00 pm.



KENNETH PARKER
PRIMARY EXAMINER